

CONVAIR
A Division of General Dynamics Corporation
San Diego

DESIGN INFORMATION BULLETIN

NO 22-3,-4, 13.001

CONVAIR REPORT NO. ZM-22-005

DATE 11 January 1960

MODEL 22 -3,-4 AIRPLANES

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VERTICAL FIN TEST SPECIMEN

1.0 PURPOSE

The purpose of this DIB is to provide a Vertical Fin Test Specimen to assist in expediting preflight and precertification test work for the Model 22-3 airplane (Capital Airlines Version). This specimen is to be identified as Model No. 99-14.

2.0 CONSTRUCTION

The Vertical Fin Test Specimen will consist of a section of Model No. 99-4 extending aft from Station 1182.50, with a Model 22-3 Vertical Fin and Rudder attached.

- 2.1 Structural design of the Vertical Fin Test Specimen is the responsibility of the Structural Test Laboratory. Structural Test personnel shall coordinate the design with personnel of Dynamics Laboratories, Dynamics, Structures, Controls Design and Hydraulics Design to provide a final product suitable for conducting rudder control system dynamic tests, fin and rudder structural tests, and rudder control system proof load tests.
- 2.2 Rudder control system installation shall be the responsibility of Dynamics Laboratories personnel, who shall coordinate with the above groups for the same purpose.
- 2.3 Release of the component parts of the specimen required for construction and test shall be the responsibility of the appropriate design groups. Structures Laboratory and Dynamics Laboratory personnel will furnish each affected design group with a list of the material required from them.
- 2.4 Experimental Factory personnel will make whatever structural repairs and modifications are necessary to adapt the fuselage of Model No. 99-4 to the configuration of Model No. 99-14.

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- 2.5 Production Factory personnel will install the vertical fin and rudder, and install the rudder control and hydraulic systems aft of Station 1182.50. These installations will be checked to the MPS requirements current at the date of completion by production factory personnel.
- 2.6 Structures Laboratory will design and arrange for the fabrication and installation of a rudder hinge moment device. Location of the completed specimen will be in Building 52, to utilize the structural test facility loading equipment present at this location.
- 2.7 Dynamics Laboratories personnel will design and arrange for the fabrication and installation of a rudder tab hinge moment device.

3.0 OPERATION

- 3.1 Dynamics Laboratories personnel will prepare a dynamic test program, design the required instrumentation, and arrange for its installation. They will conduct dynamic control system tests. Cooperation will be maintained with Dynamics, Control Design and Hydraulic Design personnel.
- 3.2 Structures Lab will provide the rudder loads required during the Dynamics Lab tests, and will conduct the fin and rudder structural tests, and rudder control system proof load tests.

4.0 CLEANUP

Following completion of the test work scheduled for this facility, the vertical fin and control and hydraulic system components used will be returned to stock through normal receiving or in-plant inspection channels to insure the stocking of satisfactory parts.

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